

“They are as follows :

Perihelion long.	239°	Hind has 243
„ dist.	755	
„ passage	July 7 ^d	
Ascending Node	83°	
Inclination	81°	
Motion direct.		

If so, a comet with a known period of 80 years will take rank with Halley's. If they could be found, it would be interesting to recompute Mechain's calculations.

“On looking through Hind's list, I find a Comet in 1797 not very unlike, and another in 68 B.C., which I feel strongly disposed to identify with our Comet. From the obscure notices of the period in the Chinese annals, it appears to have had a perihelion distance of 8, and an inclination of 70°. Adding 68 to 1861, we have 1929, a near enough multiple of 80, when it is considered how much the cometary periods vary.

“No doubt all this has been discovered, and much more satisfactorily, in Europe; but it is new at least in this country.

“W. S. M.”

“*Chinsurah*, 19th July, 1861.

“My observations were,—

		R. A.	N. Decl.
	^h ^m	[°] ['] ^{''}	[°] ['] ^{''}
July 5	3 12	172 31 30	66 40 20
10	3 12	206 10 15	59 41 17
15	3 12	215 41 0	54 50 32

The time is Greenwich mean time.”

Extract of a Letter from Mr. Lassell.

(Communicated by Prof. De Morgan.)

“The principal work, however, I have hitherto done is the perfectly successful erection of the four-foot Equatoreal, on a most favourable site near Fort Tigné, on the north side of the Quarantine Harbour in this island. It differs a little from the lithographic drawing in the possession of the Society, as it is now erected in the latitude for which it was constructed, and not, as in that sketch, with the polar axis inserted in an excavation, to allow of its temporary use in the latitude of Liver-

pool. It is, indeed, much more substantially erected, with a view to its permanent efficiency in this far more favourable climate, where I trust it will do all that can reasonably be expected from 48 inches of aperture. I am glad to say that I have had no accident whatever in the erection, nor in the transmission of the mirrors, that which is now in the tube, after the dissolution and removal of its coat of varnish, having come out as fine in lustre as if it had been polished only yesterday.

"I have hitherto only cursorily examined a few objects, some of the minor conveniences of the apparatus not being yet quite completed; but I see enough to convince me that I have now a much more powerful and efficient telescope than I have ever possessed before. We are now passing through the most unsettled portion of the year, and I have found this so-called winter less favourable for the use of a large telescope than the same portion of the year 1852; I can, therefore, scarcely tell what the telescope will do under the most favourable circumstances. In turning it, however, upon the Nebula in *Orion*, I see so much more of its wonderful constitution, that I feel very ill-satisfied with my former drawings, and must begin anew. I was, indeed, at first rather surprised, perhaps disappointed, not to see many more new stars; but, on reflection, I am inclined to think this may be satisfactorily accounted for by the great increase of brightness of the Nebula rendering the eye less sensible to very minute points of light. And this view is confirmed by observations of stars in the day-time with the transit instrument, which, I suppose from the greater light of the sky here, are scarcely so visible as in England.

"The fainter and interior satellites of *Uranus*, *Umbriel* and *Ariel*, though as much inferior in brightness to what have been called the bright satellites, as *Rhea*, or even *Dione*, among the satellites of *Saturn*, is to *Titan*, are conspicuous objects; and, with a magnifying power of 1060, not to be overlooked on any tolerable night. If *Uranus* has any other satellites than these, they must be very much smaller or fainter.

"The only indication of *Saturn's* ring at present visible is its shadow as a thin, hard, dark, rough line across or along the equator of the planet, which is now so full of sharp belts over almost all its surface, that it might be taken for a view of *Jupiter* with a smaller telescope. On the 25th instant all the satellites but *Japetus* were in the field of view at once; *Mimas* and *Enceladus* within a very few seconds, indeed, of the limb of the planet; the latter almost touching it. Another of the nearer satellites emerged from behind the preceding limb during observation.

"P. S.—It is, perhaps, scarce worth mentioning, and yet it struck me as either a fortunate coincidence or an evidence of care, that I have had no occasion to touch the adjustments of either Right Ascension or Polar Distance since the telescope was

first directed to a celestial object; and, without having made any observations expressly for the purpose, I have not been made aware of any obvious error, in turning the telescope upon such objects as I have examined.

“9 *Piazza Slierna, Malta, 28th January, 1862.*”

And, in a letter dated the 30th January, Mr. Lassell writes,—“The detention of the mail allows me to add a post-script to my letter of yesterday, to inform you of my having discovered, last night, a new star within the trapezium in the great Nebula of *Orion*. It is situated near *Theta*, the principal star; appears to be about a full magnitude less than that known as ‘the sixth star;’ and is about one sixteenth of its distance from *Theta*. Its angle of position from *Theta* is about 100° less than that of ‘the sixth star;’ and, consequently, points a little eastward of the star at the opposite angle of the trapezium. For verification I annex a diagram.



“I suspect that the position-angle of ‘the sixth star’ has considerably increased since 1852.”

Results of Meridional Observations of Small Planets; Occultation of a Star by the Moon; and Phenomena of Jupiter’s Satellites; observed at the Royal Observatory, Greenwich, during the months of January and February, 1862.

(Communicated by the Astronomer Royal.)

Metis (9).

Mean Solar Time of Observation.			R. A. from Observation.			N.P.D. from Observation.			
	h	m	s	h	m	s	°	'	"
1862, Jan. 16	13	25	54.4	9	10	46.25	64	58	1.11
22	12	56	31.4	9	4	57.79	64	17	28.31
24	12	46	36.6	9	2	54.52	64	4	35.41
25	12	41	37.8	9	1	51.44	63	58	19.81
27	12	31	39.3	8	59	44.39	63	46	12.19
28	12	26	39.7	8	58	40.53	63	40	17.65
Feb. 3	11	56	40.3	8	52	15.56	63	8	28.38
7	11	36	48.6	8	48	6.80	62	50	58.54
10	11	22	2.0	8	45	7.42	62	39	54.42